

State of California  
AIR RESOURCES BOARD

EXECUTIVE ORDER A-14-333  
Relating to Certification of New Motor Vehicles

TOYOTA MOTOR CORPORATION

Pursuant to the authority vested in the Air Resources Board by the Health and Safety Code, Division 26, Part 5, Chapter 2; and

Pursuant to the authority vested in the undersigned by Health and Safety Code Sections 39515 and 39516 and Executive Order G-45-9;

IT IS ORDERED AND RESOLVED: That 1998 model-year Toyota Motor Corporation exhaust emission control systems are certified as described below for light-duty trucks:

Emission Standard Category: Transitional Low-Emission Vehicle (TLEV)

Fuel Type: Gasoline

Engine Family: WTYXT03.4DBP Displacement: 3.4 Liters (206.1 Cubic Inches)

Exhaust Emission Control Systems and Special Features:

Sequential Multiport Fuel Injection  
Heated Oxygen Sensors (two)  
Three Way Catalytic Converter

Vehicle models, transmissions, engine codes and evaporative emission control families are listed on attachments.

The non-methane organic gas (NMOG), carbon monoxide (CO), oxides of nitrogen (NO<sub>x</sub>), and formaldehyde (HCHO) TLEV certification exhaust emission standards for this engine family in grams per mile are:

<u>Loaded Vehicle Weight (lbs.)</u>	<u>Miles</u>	<u>NMOG</u>	<u>CO</u>	<u>NO<sub>x</sub></u>	<u>HCHO</u>	<u>CO (20°F)</u>
3751-5750	50,000	0.160	4.4	0.7	0.018	12.5
	100,000	0.200	5.5	0.9	0.023	n/a

Reactivity Adjustment Factor (RAF) for NMOG Mass Emission: 0.98

The certification exhaust emission values set forth for NMOG reflect application of a 0.98 RAF for 1998 model-year TLEVs. The TLEV certification exhaust emission values for this engine family in grams per mile are:

<u>Loaded Vehicle Weight (lbs.)</u>	<u>Miles</u>	<u>NMOG</u>	<u>CO</u>	<u>NO<sub>x</sub></u>	<u>HCHO</u>	<u>CO (20°F)</u>
3751-5750	50,000	0.116	2.0	0.2	0.002	5.3
	100,000	0.128	2.3	0.3	0.003	n/a

BE IT FURTHER RESOLVED: That the vehicle manufacturer is certifying the listed vehicle models to the aforementioned exhaust emission standards based on its submitted plan to comply with the fleet average NMOG exhaust mass emission requirements as set forth in "California Exhaust Emission Standards and Test Procedures for 1988 and Subsequent Model Passenger Cars, Light-Duty Trucks, and Medium-Duty Vehicles."

BE IT FURTHER RESOLVED: That under the submitted NMOG fleet average compliance plan, if the manufacturer incurs a NMOG debit for the aforementioned model year based on the projected NMOG fleet average exceeding the value required by the above-referenced standards and test procedures, all incurred NMOG debits by the manufacturer shall be equalized as required by the standards and test procedures.

BE IT FURTHER RESOLVED: That the vehicle manufacturer is certifying the listed vehicle models to the running loss and useful life standards applicable to 1995 and subsequent model-year vehicles in the "California Evaporative Emission Standards and Test Procedures for 1978 and Subsequent Model Motor Vehicles," and the listed vehicle models comply with those standards.

BE IT FURTHER RESOLVED: That the listed vehicle models also comply with the Board's "Specifications for Fill Pipes and Openings of Motor Vehicle Fuel Tanks" for the aforementioned model year (Title 13, California Code of Regulations, Section 2235).

BE IT FURTHER RESOLVED: That the listed vehicle models also comply with the Board's high-altitude requirements and highway emission standards, and with the California Inspection and Maintenance emission standards in place at the time of certification, as stipulated in "California Exhaust Emission Standards and Test Procedures for 1988 and Subsequent Model Passenger Cars, Light-Duty Trucks, and Medium-Duty Vehicles."

BE IT FURTHER RESOLVED: That the listed vehicle models also comply with the "California Motor Vehicle Emission Control and Smog Index Label Specifications" for the aforementioned model year (Title 13, California Code of Regulations, Section 1965).

BE IT FURTHER RESOLVED: That the vehicle manufacturer has demonstrated compliance with the exhaust emission standards at 50 degrees Fahrenheit as stipulated in "California Exhaust Emission Standards and Test Procedures for 1988 and Subsequent Model Passenger Cars, Light-Duty Trucks, and Medium-Duty Vehicles."

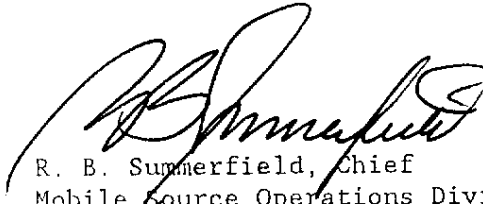
BE IT FURTHER RESOLVED: That for the listed vehicles, the manufacturer has submitted and the Executive Officer hereby approves the materials to demonstrate certification compliance with the Board's emission control system warranty provisions (Title 13, California Code of Regulations, Section 2035 et seq.).

BE IT FURTHER RESOLVED: That the listed vehicle models also comply with the "Malfunction and Diagnostic System Requirements--1994 and Subsequent Model-Year Passenger Cars, Light-Duty Trucks, and Medium-Duty Vehicles and Engines" (Title 13, California Code of Regulations, Section 1968.1) for the aforementioned model year.

Vehicles certified under this Executive Order must conform to all applicable California emission regulations.

The Bureau of Automotive Repair will be notified by copy of this order and attachment.

Executed at El Monte, California this 10<sup>th</sup> day of June 1997.



R. B. Summerfield, Chief  
Mobile Source Operations Division

17.11.00

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**1998 MODEL-YEAR AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET**  
**PASSENGER CARS, LIGHT-DUTY TRUCKS AND MEDIUM-DUTY VEHICLES**

Manufacturer: TOYOTA Exh Eng Fam: WTYXT03.4DBP Evap Fam: WTYXE0095AE0  
 All Eng Codes in Eng Fam: CA 49S 50S AB965 , ORVR: YES NO X  
 Exh Std: CA Tier-1 TLEV X LEV ULEV SULEV , US EPA Tier-1 X  
 Veh Class(es): PC LDT1 LDT2 X MDV1 MDV2 MDV3 MDV4 MDV5 X  
 Single Cert Std for Multi-Class Eng Fam: N/A (specify: N/A, LDT1, MDV1, MDV2, MDV3, MDV4)  
 Fuel Type(s): Dedicated X Flex-Fuel Dual-Fuel Bi-Fuel Gasoline X Diesel CNG LNG LPG M85 Other (specify) \_\_\_\_\_  
 Exh Emiss Test Fuel(s): Indo CBG X CNG LPG M85 Other (specify) \_\_\_\_\_  
 Diesel: 13 CCR 2282 40 CFR 86.113-90 40 CFR 86.113-94 \_\_\_\_\_  
 Evaporative Emission Test Procedure: California Federal X  
 Service Accum: Std AMA X Mod AMA Mfr ADP Other (specify) \_\_\_\_\_  
 NMOG Test Procedure: N/A Std X Equip R/L Test Proc: SHED X Pt Source \_\_\_\_\_  
 Engine Configuration: V-6 Displacement: 3.4 Liters 206.1 Cubic Inches  
 Valves per Cylinder: 4 Rated HP1: 190@4800\*1\*4 RPM  
 Rated HP2: 183@4800\*2\*3 RPM  
 Engine: Front X Mid Rear Drive: FWD RWD X\*2\*4 4WD-FT 4WD-PT X\*1\*3  
 Exhaust ECS (e.g., MFI, EGR, TC, CAC): SFI,HO2S(2),TWC(2)  
 (use abbreviations per SAE J1930 JUN93)

Note \*1 : Applied to truck line TOYOTA TACOMA 4WD.  
 Note \*2 : Applied to truck line 4RUNNER 2WD.  
 Note \*3 : Applied to truck line 4RUNNER 4WD.  
 Note \*4 : Applied to truck line TOYOTA TACOMA 2WD.

Engine Code (also list CA/49S/50ST)	Vehicle Models (if coded see attachment)	Trans. (M5, A4, etc.)	ETW or Test Wt	DPA or RLHP	Ignition (ECM/PCM) Part No.	EGR system Part No.	Catalytic Converter Part No.
1	VZN170L-CRMDKAB VZN170L-CRMGKAB	M5	3875	14.5/14.6	89661-04410*5 89661-04411*6 89661-04412*8	N/A	S99*1*4 S91*2*3
	VZN185L-GKMGKA		4250	12.2/13.3	89661-3D360*5 89661-3D361*6 89661-3D361*8		
2	VZN170L-CRMDKAB VZN170L-CRMGKAB		3875	15.9/16.0	89661-04410*5 89661-04411*6 89661-04412*8		

\*5 : Before 98-TR-2  
 \*6 : After 98-TR-2 and before 98-TR-15  
 \*7 : After 98-TR-2/98-TR-3 and before 98-TR-15  
 \*8 : After 98-TR-15  
 \*9 : Before 98-TF-8  
 \*10 : After 98-TF-8

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Issued : 05/01/97 98-TR-2 : 08/08/97 98-TR-3 : 09/30/97 98-TR-15 : 02/05/98  
 98-TF-8 : 03/31/99

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**1998 MODEL-YEAR AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET**  
**PASSENGER CARS, LIGHT-DUTY TRUCKS AND MEDIUM-DUTY VEHICLES**

Manufacturer: TOYOTAExh Eng Fam: WTYXT03.4DBPEvap Fam: WTYXE0095AE0

Engine Code (also list CA/49S/50ST)	Vehicle Models (if coded see attachment)	Trans. (M5, A4, etc.)	ETW or Test Wt	DPA or RLHP	Ignition (ECM/PCM) Part No.	EGR system Part No.	Catalytic Converter Part No.
2	VZN185L-GKMGKA		4250	13.5/14.7	89661-3D360*5 89661-3D361*6 89661-3D362*8	N/A	S99*1*4 S91*2*3
3	VZN170L-CRPDKAB VZN170L-CRPGKAB VZN195L-CRPDKAB  VZN185L-GKPGKA	L4	3875	14.5/14.6	89661-04420*5		
			3750	13.7/14.1/14.4	89661-04421*7 89661-04540*8		
			4250	12.2/13.3	89661-3D370*5 89661-3D371*6 89661-3D372*8		
4	VZN170L-CRPDKAB VZN170L-CRPGKAB VZN195L-CRPDKAB  VZN185L-GKPGKA VZN185L-GKPZKA		3875	15.9/16.0	89661-04420*5		
			3750	15.0/15.5/15.8	89661-04421*7 89661-04540*8		
			4250	13.5/14.7 14.7	89661-3D370*5 89661-3D371*6 89661-3D372*8*9 89661-3D373*10		
7	VZN180L-GKPGKA		3875	12.0/12.1	89661-3D380*5		
8	VZN180L-GKPGKA VZN180L-GKPZKA		3875 4000	13.2/13.3 13.3	89661-3D381*6 89661-3D382*8*9 89661-3D383*10		

Comments : Please refer to manufacturer's HP list for correct dyno test HP setting based on model and equipment.

1998 MODEL-YEAR AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET  
PASSENGER CARS, LIGHT-DUTY TRUCKS AND MEDIUM-DUTY VEHICLES

Manufacturer: TOYOTAExh Eng Fam: WTYXT03.4DBPEvap Fam: WTYXE0095AE0

Engine Code (also list CA/49S/50ST)	Vehicle Models (if coded see attachment)	Trans. (M5, A4, etc.)	ETW or Test Wt	DPA or RLHP	Ignition (ECM/PCM) Part No.	EGR system Part No.	Catalytic Converter Part No.
2	VZN185L-GKMGKA		4250	13.5/14.7	Before R/C 98-TR-2: 89661-3D360 After R/C 98-TR-2: 89661-3D361	N/A	S99*1 S91*2*3
3	VZN170L-CRPDKAB VZN170L-CRPGKAB  VZN185L-GKPGKA	L4	3875	14.5/14.6	Before R/C 98-TR-2: 89661-04420 After R/C 98-TR-2: 89661-04421		
			4250	12.2/13.3	Before R/C 98-TR-2: 89661-3D370 After R/C 98-TR-2: 89661-3D371		
4	VZN170L-CRPDKAB VZN170L-CRPGKAB  VZN185L-GKPGKA VZN185L-GKPZKA		3875	15.9/16.0	Before R/C 98-TR-2: 89661-04420 After R/C 98-TR-2: 896610-04421		
			4250	13.5/14.7 14.7	Before R/C 98-TR-2: 89661-3D370 After R/C 98-TR-2: 89661-3D371		
7	VZN180L-GKPGKA		3875	12.0/12.1	Before R/C		
8	VZN180L-GKPGKA VZN180L-GKPZKA		3875 4000	13.2/13.3 13.3	98-TR-2: 89661-3D380 After R/C 98-TR-2: 89661-3D381		

Comments : Please refer to manufacturer's HP list for correct dyno test HP setting based on model and equipment.

1998 MODEL-YEAR AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET  
PASSENGER CARS, LIGHT-DUTY TRUCKS AND MEDIUM-DUTY VEHICLESManufacturer: TOYOTA Exh Eng Fam: WTYXT03.4DBP Evap Fam: WTYXE0095AE0VEHICLE MODELS:

<u>4RUNNER 2WD</u>	<u>4RUNNER 4WD</u>	<u>TOYOTA TACOMA 4WD</u>
VZN180L-GKPGKA	VZN185L-GKMGKA	VZN170L-CRMDKAB
VZN180L-GKPZKA	VZN185L-GKPGKA	VZN170L-CRMGKAB
	VZN185L-GKPZKA	VZN170L-CRPDKAB
		VZN170L-CRPGKAB

**1998 MODEL-YEAR AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET  
PASSENGER CARS, LIGHT-DUTY TRUCKS AND MEDIUM-DUTY VEHICLES**

Manufacturer: TOYOTA Exh Eng Fam: WTYXT03.4DBP Evap Fam: WTYXE0115AE0  
 All Eng Codes in Eng Fam: CA 49S 50S x AB965 ORVR: YES NO x  
 Exh Std: CA Tier-1 TLEV x LEV ULEV SULEV US EPA Tier-1 x  
 Veh Class(es): PC LDT1 LDT2 x MDV1 MDV2 MDV3 MDV4 MDV5  
 Single Cert Std for Multi-Class Eng Fam: N/A (specify: N/A, LDT1, MDV1, MDV2, MDV3, MDV4)  
 Fuel Type(s): Dedicated x Flex-Fuel Dual-Fuel Bi-Fuel Gasoline x Diesel CNG LNG LPG M85 Other (specify) Diesel: 13 CCR 2282 40 CFR 86.113-90 40 CFR 86.113-94  
 Exh Emiss Test Fuel(s): Indo CBG x CNG LPG M85 Other (specify) California Federal x  
 Evaporative Emission Test Procedure: Std AMA x Mod AMA Mfr ADP Other (specify) N/A Std x Equiv R/L Test Proc: SHED x Pt Source  
 NMOG Test Procedure: V-6 Displacement: 3.4 Liters 206.1 Cubic Inches  
 Engine Configuration: 4 Rated HP1: 190@4800 RPM  
 Valves per Cylinder: 4 Engine: Front x Mid Rear Drive: FWD RWD x\*1 4WD-FT 4WD-PT x\*2  
 Exhaust ECS (e.g., MFI, EGR, TC, CAC): SFLHO2S(2),TWC

(use abbreviations per SAE J1930 JUN93)

Note \*1: Applied to truck line TOYOTA T100 2WD.

Note \*2: Applied to truck line TOYOTA T100 4WD.

Engine Code (also list CA/49S/50ST)	Vehicle Models (if coded see attachment)	Trans. (M5, A4, etc.)	ETW or Test Wt	DPA or RLHP	Ignition (ECM/PCM) Part No.	EGR system Part No.	Catalytic Converter Part No.
1	VCK21L-CRMDKA VCK21L-CRMSKA VCK21L-TRMDKA	M5	4250	15.2/16.6	Before R/C 98-TR-2: 89661-34340	N/A	S95*2 S96*1
2	VCK21L-CRMDKA VCK21L-CRMSKA VCK21L-TRMDKA		4250	16.6/18.0	After R/C 98-TR-2: 89661-34341		
3	VCK21L-CRSDKA VCK21L-CRSSKA VCK21L-TRSDKA	L4	4250 4500 4250	15.2/16.6	Before R/C 98-TR-2: 89661-0W060		
4	VCK21L-CRSDKA VCK21L-CRSSKA VCK21L-TRSDKA		4500 4250	16.6/18.0	After R/C 98-TR-2: 89661-0W061		
5	VCK11L-CRMDKA VCK11L-CRMSKA VCK11L-THMDKA	M5	3875 3750	12.3/13.6 13.6	Before R/C 98-TR-2: 89661-34350		
6	VCK11L-CRMDKA VCK11L-CRMSKA VCK11L-THMDKA		3875	13.6/15.0 15.0	After R/C 98-TR-2: 89661-34351		

**1998 MODEL-YEAR AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET  
PASSENGER CARS, LIGHT-DUTY TRUCKS AND MEDIUM-DUTY VEHICLES**

Manufacturer: TOYOTAExh Eng Fam: WTYXT03.4DBPEvap Fam: WTYXE0115AE0

Engine Code (also list CA/49S/ 50ST)	Vehicle Models (if coded see attachment)	Trans. (M5, A4, etc.)	ETW or Test Wt	DPÁ or RLHP	Ignition (ECM/PCM) Part No.	EGR system Part No.	Catalytic Converter Part No.
7	VCK11L-CRSDKA VCK11L-CRSSKA VCK11L-THSDKA	L4	3875	12.3/13.6 13.6	Before R/C 98-TR-2: 89661-0W070	N/A	S95*2 S96*1
8	VCK11L-CRSDKA VCK11L-CRSSKA VCK11L-THSDKA		3875 4000 3875	13.6/15.0 15.0	After R/C 98-TR-2: 89661-0W071		

Comments : Please refer to manufacturer's HP list for correct dyno test HP setting based on model and equipment.

VEHICLE MODELS:TOYOTA T100 2WD

VCK11L-CRMDKA  
VCK11L-CRMSKA  
VCK11L-CRSDKA  
VCK11L-CRSSKA  
VCK11L-THMDKA  
VCK11L-THSDKA

TOYOTA T100 4WD

VCK21L-CRMDKA  
VCK21L-CRMSKA  
VCK21L-CRSDKA  
VCK21L-CRSSKA  
VCK21L-TRMDKA  
VCK21L-TRSDKA